

Technical support to our customers is an integral part of fulfilling the County Road Administration Board's mission. Quality training is one of our most effective vehicles for providing that support. Our classes are informal, fun, and provide a unique window to the current technology and development at CRAB. We are continually monitoring our training program to ensure it meets the needs of the products we support and the counties we serve. Please review the following course descriptions and watch The Passing Lane for course schedules, and sign up for the training you want using the registration form on the back page of this catalog. And don't forget, CRAB TRAINING IS FRFF!

CRIS 101

↑ Introduction to CRIS **↑**

The County Road Information System (CRIS) is currently in use by all 39 Washington counties CRIS is made up of over 15 inventory applications integrated to allow monitoring of all the vital eatures of a county road system. Additionally, CRIS includes three management systems building on the valuable information contained in the CRIS inventories.

This introductory CRIS course assumes no previous CRIS experience. The class will cover thebasic concepts of a multi-user database tool and the specific features of CRIS. Topics covered include

- How to locate, view and modify CRIS records
- How to use the on-line documentation
- How to maintain and submit required inventories
- How to run pre-programmed reports
- How to create custom reports

While there are no specific prerequisites for this course, a general familiarity with personal computers and typing skills will be helpful.

Location: Olympia Cost: FREE Length: 1 day

PMS 201 Intro to the County Pavement Management Planning System

This class presents an overview of the CRIS pavement management module. (Creatively named CPMPS, for County Pavement Management Planning System.) The course begins with a discussion of "What is pavement mana

gement?", continues with hands on help using this planning tool. Finally, we attempt to leaveyou with an appreciation for the value of pavement management and an understanding of its relationship to the County Americal Preservation Program (CAPP) and the Intermodal Surface Transportation Efficiency Act (ISTEA). Included topicsare:

- Pavement condition information collection and management
- Project analysis
- Road network analysis
- Advanced use and modification of CPMPS parameters
- Custom reporting

A working knowledge of CRIS and the roadlog is required to register for this class. Completing the *Introduction to CRIS* course would be recommended.

Location: Olympia Cost: FREE Length: 2 days

CRIS 245

CRIS Reporting Workshop

Another name for this course could be "Advanced CRIS". While it is fairly easy to collect and mailtain road system data in CRIS, it can be a challenge to summarize and present that data in a meaningful way. CRIS includes a wide array of reporting tools and this two day course will explore all of those methods. This course is only valuable attendants who come to class with specific questions about how to use CRIS in their own counties. Bring at least one example of a report you would like to have but don't.

Successful completion of the "Introduction to CRIS" course (or equivalent experience) is required to attend this workshop.

Location: Olympia Cost: FREE Length: 2 days

CRIS 178

CRIS Maintenance Management System 🛣

This course presents an overview of the CRIS maintenance management system (MMS) which is a dol for maintenance managers, planners and/or supervisors. The goal of our MMS is to automate the good management practices of the road maintenance discipline. By making your maintenance more systematic (and therefor, more objective and consistent) your budget and progress become more predictable and defensible. Topics covered include:

- How to effectively automate your maintenance management cycle
- Maintenance planning that leads to a defensible budget
- Tracking and evaluating progress (with course corrections)
- Objective and consistent planning through historical analysis

There are no specific requirements to register for this course, just bring a couple fingers of type with and an eagerness to learn.

Location: Olympia Cost: FREE Length: 1 day

CEAL 102

Introduction to CEAL

The Civil Engineering Automation Library (CEAL) is a computer program for engineers currently in use by 25 Washington counties through a statewide license. CEAL offers a great deal of functionality for the roaddesign engineer. CEAL functions are divided into four categories for convenience. This course covers the first two categories, Util and COGO. CEAL Util is a set of commands for controlling the operation of the CEAL system. CEAL COGO is an aconym for coordinate geometry, a system for calculating the locations of points, curves, and lines in 2D space.

This introductory CEAL course assumes no previous CEAL experience. The objectives of the **o**urse are to familiarize the user with the CEAL manual and how to solve COGO problems. Some aspects of plotting entities and transferring them to CAD or devices is also covered. Among those topics covered:

- · CEAL symbols, objects, and syntax explained
- Configuring your CEAL sessions, including SPEC files
- Solving problems in Coordinate Geometry, including Interactive COGO (ICOGO)
- Computing roadway alignments
- Fundamentals of CEAL graphics

While there are no specific prerequisites for this course, a general familiarity with personal computers and typing/mouse skills will be helpful.

Location: Olympia Cost: FREE Length: 2 days

CEAL 269

CEAL Road Design

CEAL is composed of four modules dividing different elements of the road design process. In this course we will explore the use of the Topography/Roads module. The road design solution, from alignment, to profit, to typical section (template), to final design, to graphical editing of base maps, profiles, and endareas, is covered. Some advanced strategies for plan/profile plotting and CAD transfer are also discussed.

This Road Design course assumes some previous CEAL experience, or attendance and achievement in CEAL 102. The objective of the course is to review the entire process for producing elementary road designs using CEAL. Among those topics covered:

- Obtaining and editing CEAL base maps based on ground survey data
- Advanced problems in alignment design
- Designing roadway profiles
- Designing roadway templates
- Producing endarea results
- Producing plan/profile sheets for CAD

This course is always scheduled immediately following Introduction to CEAL for the convenience of those wishing to take both courses on the same trip to Olympia.

Location: Olympia Cost: FREE Length: 2 days

CEAL 408

☆ CEAL Advanced Series ☆

This series is divided into 3 sections. You may choose to enter one or more of the sessions separately, or all together. The topics are meant to be a starting point for group research into solutions of more complex problems. Time is allowed for solving problems of specific interest to the individual attendee.

Plan Production (Day 1) Covers the finer points of producing plan elements using CEAL. Transerring plots to CAD using CECAD, schedule and symbol files, and full scale vs paper scale plotting are among the topicscovered.

Design Animation (Day 2) Covers animation concepts. Review of steps necessary for preparing animation in CEAL. Using ROADSHOW to run animations in Autocad. Modeling and merging bridges with DTM's.

Prompts Design (Day 3) Prompts are interactive CEAL command scripts. Flow control, user input variable types and handling, subroutines are all used to help your scripts become interactive procedures.

This Advanced sequence assumes significant previous CEAL experience. The objective of the course is to provide a forum for exchange of ideas about topics of interest to the CEAL design community. No two advanced workshops will be the same, and the list of daily topics is a general guideline.

This sequence is always scheduled in the same order. The user may choose any or all days in whib to attend.

Location: Olympia Cost: FREE Length: 3 days

Eagle Point is an engineering design program which runs inside of Autocad. It performs COGQ road, site, graphics, hydrologic, and hydraulic design functions within an Autocad session. This course will cover data collection, COGO, and drafting features using a site design example. We'll also explore the program's road design features and graphics using a realignment example. Among the topics covered are:

- Data collection coding and download
- COGO design and drafting
- Surface modelling (DTM and contours)
- Road design alignments/templates/profiles
- Producing plan/profile sheets

This is the first year CRAB is supporting Eagle Point so you might expect some mid-course corretions from the plotted trajectory.

Location: Olympia Cost: FREE Length: 4 days

CRIS 223

CRIS Bridge Management System &

This course presents an overview of the Bridge Management System (BMS) module within CRIS. This course should provide a bridge engineer or technician with the knowledge and tools to collect, report and transfer bridge data to WSDOT that satisfies the requirements of NBI and ISTEA. This module is a combination of SWIBS (theirventory system that reports to NBI) and PONTIS (the BMS for Washington State that satisfies ISTEA requirements). Topics covered include:

- Collecting and storing inventory and inspection data for SWIBS
- Printing reports and forms for SWIBS collection and analyses
- Internal SWIBS system checks and balances
- Collecting and storing bridge element data for PONTIS
- Transferring SWIBS and PONTIS data to WSDOT by diskette

Recognizing that some counties have only one choice for bridge engineer we cannot define preequisites for the course but would ask attendees to try to familiarize themselves with any existing CRIS applications in their county previous to the class.

Location: Olympia Cost: FREE Length: 1 day

BEAK 122

Colfax Design Workshop

This workshop has become an annual tradition of CEAL users in Cougar country finding the asswers to all their questions. This year, Whitman County wants to invite all of those Cougars who are trying out Eagle Point for the first time to come visit for a four day Eagle Point Fundamentals course (for agenda, see BEAK 121). Although the course is in Colfax, the registration is still at CRAB. This is a once a year event in February.

Location: Colfax Cost: FREE Length: 4 days

CRIS 123

Colfax Management Systems Workshop

OK, the computers are already in Colfax, why not teach some CRIS classes? The exact content of this workshop will be scheduled based on what we hear from you. Any of the courses in this catalog can be taught. Watch The Passing Lane for a more definitive schedule.

Location: Colfax Cost: FREE Length: 4 days

COURSE REGISTRATION FORM County Road Administration Board - Information Services Training

Name	Course Name or Number(s)
County	Course Date(s)
Street	Telephone
City State Zip	FAX
	EGISTRATION FORM Board - Information Services Training
Name	Course Name or Number(s)
County	Course Date(s)
Street	Telephone
City State Zip	FAX

Please return this form by **FAX at (360) 586-0386** or mail to The County Road Administration Board, 2404 Chandler Ct. SW, #240, Olympia, WA 98504-0913. You may also register for courses by**phone at (206) 664-CEAL** for CEAL, **(360) 664-CRIS** for CRIS, or **(360) 664-BEAK** for Eagle Point. Feel free to copy this form for multiple registrations.